

SP-T2 PROJECT EFFECTS ON SPECIAL STATUS SPECIES (WILDLIFE) DRAFT FINAL REPORT



**OROVILLE FACILITIES
RELICENSING
FERC PROJECT NO. 2100**

INTRODUCTION

- ▶ This study provides:
- ▶ information for Endangered Species Act consultations with the US Fish and Wildlife Service (USFWS) and California Department of Fish and Game (DFG)
- ▶ information for Federal agencies review of the project under Section 4(e) of the Federal Power Act
- ▶ a description of existing conditions and potential project effects on special status species as required by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

INTRODUCTION

- ▶ Potential impacts under the State or Federal Endangered Species acts are current license issues rather than relicensing issues.
- ▶ Public release of specific location information related to species protected under the State and Federal Endangered Species acts can result in increased risk to the species (disturbance, harassment, shooting, and illegal collection). For these reason, location information is treated in a general rather than a specific manner in this report.

STUDY OBJECTIVE(S)

- ▶ Provide information on special status species occurrence and distribution within the study area
- ▶ Provide information on potential project effects to special status species for use in the environmental assessment process including the consultation processes with State and Federal wildlife management agencies
- ▶ Provide information that can be used to identify opportunities for habitat protection and enhancement for special status species

STUDY AREA

- ▶ The study area for this investigation includes the FERC Project Boundary and the lower Feather River downstream from the Fish Barrier Dam to the Sacramento River
- ▶ The study area extends beyond the FERC boundary for evaluation of effects related to the analysis of project operations
- ▶ Scope of surveys for BLM and USFS sensitive and USFS special interest species included Federal lands within the study area, adjacent Federal lands outside the study area, and State lands within the study area adjacent to Federal lands.

BANK SWALLOW HABITAT AND POPULATION SURVEYS-METHODS

- ▶ All potential bank swallow habitat within the project area was surveyed during the 2002 and 2003 breeding seasons. A primarily boat-based survey of the Feather River between Oroville Dam and Verona was completed each June
- ▶ All active and inactive colonies were mapped and the total number of burrows in each colony was tabulated
- ▶ The distance from the waterline to the lowest burrow in each active colony was estimated during 2003



BANK SWALLOW HABITAT AND POPULATION SURVEYS -RESULTS

Category	2002	2003
# of colonies	14	18
# of active colonies	8	15
Total # of burrows	3,087	4,179
Total # of burrows in active colonies	2,274	3,594

BANK SWALLOW HABITAT AND POPULATION SURVEYS -RESULTS

- ▶ The last complete bank swallow survey of the Feather River occurred in 1988
- ▶ 18 colonies containing a total of 6,592 burrows were recorded in 1988
- ▶ Total # of burrows has decreased 37% since 1988.

BANK SWALLOW HABITAT AND POPULATION SURVEYS -RESULTS

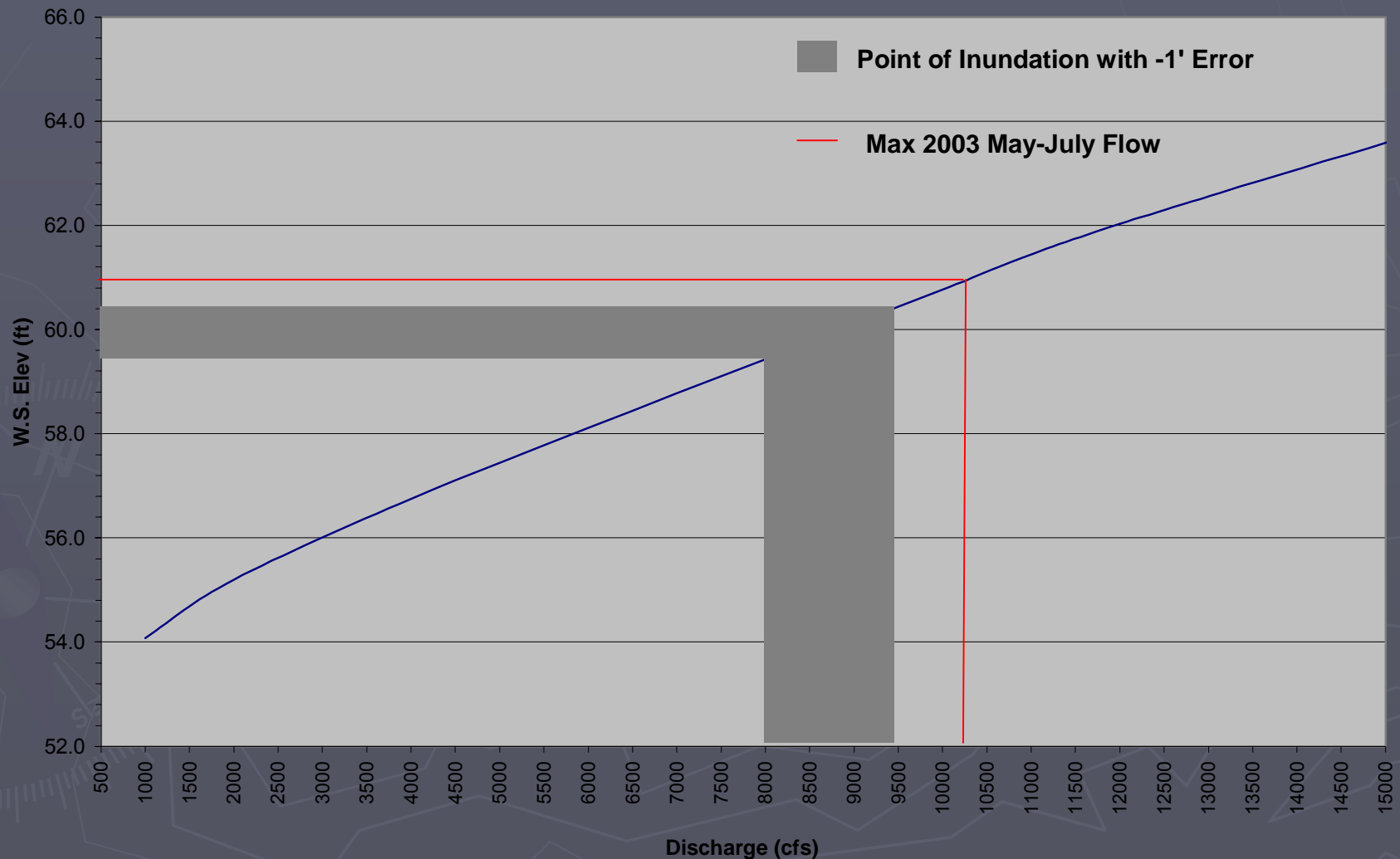
- ▶ No bank swallow nesting was observed within the project area.
- ▶ Limited potential exists to create bank swallow nesting habitat within the project area.
- ▶ Evaluation of project effects are restricted to project related alteration to the timing and magnitude of streamflow on the Feather River below the project area.

BANK SWALLOW IMPACT ANALYSES

- ▶ Stage discharge relationships were modeled for each 2003 active colony locations.
- ▶ These stage/discharge relationships were compared to the elevation of the lowest burrow in each colony with a 1-foot buffer.
- ▶ Modeling indicates that current project operations during early July have the potential to inundate at least a portion of 9 of the 15 active colonies while pre-fledged young are potentially present within the nest burrows.
- ▶ Based on modeling results, DWR initiated consultation with DFG.

BANK SWALLOW IMPACT ANALYSES

Figure 5.4.2 Stage/Discharge Relationship at
Bank Swallow Colony 4- RM 45.05



GREATER SANDHILL CRANE HABITAT AND POPULATION SURVEYS-METHODS

- ▶ All potentially suitable sandhill crane habitats within the project area and within ½ mile of the project area were surveyed weekly during the first three weeks of September
- ▶ All sandhill cranes observed were recorded and mapped.
- ▶ The survey period (early to mid-September) was selected as previous Sacramento Valley studies indicate that only greater sandhill cranes are present during this period.



GREATER SANDHILL CRANE HABITAT AND POPULATION SURVEYS-RESULTS

- ▶ No sandhill cranes were detected during survey period
- ▶ 2 sandhill cranes were observed in flight in late September 2003 over brood pond A1
- ▶ No habitat use observed

GREATER SANDHILL CRANE IMPACT ANALYSES

- ▶ Survey data indicate that a limited amount of marginally suitable wintering habitat is present within the project area.
- ▶ Survey results indicate that greater sandhill crane use of the project area and adjacent agricultural habitats is at best uncommon.
- ▶ No direct project related effects have been identified or are likely based on the current absence of use.

PERGEGRINE FALCON HABITAT AND POPULATION SURVEYS -METHODS

- ▶ Pre-survey GIS analysis identified slopes over 65 percent. These areas were examined during 2002 or 2003.
- ▶ Also surveyed cliff-like human structures
- ▶ All potential nest sites were inspected at a minimum of once a month throughout the breeding season (February through July).
- ▶ Active nest territories were surveyed more frequently.



PERGEGRINE FALCON HABITAT AND POPULATION SURVEYS -RESULTS

Category	2002	2003
# of active territories	3	4
# of occupied territories	2	2
Production/active territory	1.0	0.75
Production/occupied territory	1.5	1.5

PERGEGRINE FALCON HABITAT AND POPULATION SURVEYS -RESULTS

- ▶ Results compare favorably with Statewide production data (1975-1988) of 0.83/active territory and 1.04/occupied territory
- ▶ Do not meet Federal Pacific Coast Recovery Plan goal of 1.5 per pair

PERGEGRINE FALCON-IMPACT ANALYSES

- ▶ No direct project related impacts were identified during the course of this investigation.
- ▶ The cliff or cliff-like nest locations generally have an excellent buffer near the nest site from human disturbance.
- ▶ Primary management concerns include site confidentiality, site security, future habitat modifications, and the potential impacts of maintenance activities.
- ▶ DWR is informally consulting with DFG to explore opportunities for improved management.

SWAINSON'S HAWK HABITAT AND POPULATION SURVEYS -METHODS

- ▶ Winter mapping of stick nests in suitable habitat
- ▶ Breeding season survey of suitable habitat
- ▶ Following birds in flight to detect nest location



SWAINSON'S HAWK HABITAT AND POPULATION SURVEYS -RESULTS

- ▶ 1 pair of Swainson's hawks was discovered during the course of the surveys.
- ▶ This pair of Swainson's hawks nested in a thin strip of mature riparian habitat within the Oroville Wildlife Area adjacent to the Feather River during 2002 and 2003.
- ▶ This nest produced two young during both breeding seasons.
- ▶ Foraging activity occurred primarily in a young walnut orchard adjacent to the project area.
- ▶ No other sightings of adult Swainson's hawks were made at any other location within the project area.



SWAINSON'S HAWK IMPACT ANALYSES

- ▶ The primary threat to the Swainson's hawk nest territory will be loss of foraging habitat as the two-year old walnut orchard matures
- ▶ The nest location is within 200 feet of active gravel mining and less than 150 feet from a gravel bar which serves as a river access point.
- ▶ Current types, levels, and timing of recreation use and mining do not appear to have adversely impacted production.
- ▶ No significant project related adverse impacts to Swainson's hawks or their habitat have been identified.

WESTERN YELLOW-BILLED CUCKOO HABITAT AND POPULATION SURVEYS-METHODS

- ▶ Surveys for nesting cuckoos were conducted within the project area using pre-recorded cuckoo calls
- ▶ All survey work was conducted during June and July 2002 and 2003
- ▶ A portable tape player was used to broadcast cuckoo calls
- ▶ In between calls the tape was stopped to listen for response calls and to observe adjacent vegetation for cuckoos
- ▶ Several call/listen cycles were repeated at a 100 yard calling distance within each block of potentially suitable nesting habitat
- ▶ Minimum habitat block size surveyed was 10 acres

WESTERN YELLOW-BILLED CUCKOO HABITAT AND POPULATION SURVEYS-RESULTS

- ▶ No western yellow-billed cuckoos were detected during the 2002 or 2003 breeding season
- ▶ Small blocks of potentially suitable habitat are present within the project area
- ▶ However, habitat blocks of adequate size (>25 acres) are currently lacking within the project area

WESTERN YELLOW-BILLED CUCKOO IMPACT ANALYSES

- ▶ Cuckoos are currently absent from the project area
- ▶ Some potential may exist to increase habitat block size within the OWA though restoration/removal of gravel tailings
- ▶ No changes in operations or downstream flow regimes have been identified. Future changes from baseline conditions could affect the quantity and quality of cuckoo nesting habitat downstream along the Feather River corridor in either a positive or negative manner

VALLEY ELDERBERRY LONGHORN BEETLE HABITAT AND POPULATION SURVEYS-METHODS

- ▶ Elderberry bushes were mapped and surveyed per USFWS protocol within 100 feet of all project features within the project area including roads levees, campgrounds, and trails.
- ▶ However, per a study plan change submitted and approved at the August 2003 Environmental Work Group meeting, no protocol level surveys were conducted within the portion of the Oroville Wildlife Area bordering the Feather River and downstream along the Feather River.
- ▶ In these areas elderberry shrubs were mapped and VELB presence was assumed based on prior sampling.



VALLEY ELDERBERRY LONGHORN BEETLE HABITAT AND POPULATION SURVEYS-RESULTS

- ▶ **Lake Oroville**-2 elderberry shrubs were identified at Lake Oroville (Canyon Creek watershed) during boat-based shoreline surveys conducted during the blooming period.
- ▶ No elderberry shrubs were detected within 100 feet of roads, campgrounds, trails or other project facilities at Lake Oroville

VALLEY ELDERBERRY LONGHORN BEETLE HABITAT AND POPULATION SURVEYS-RESULTS

- ▶ **Oroville Dam to Table Mountain Boulevard**-Elderberry shrubs become increasing more common within the Feather River corridor between Oroville Dam and the Fish Diversion Pool, and along the Power Canal.
- ▶ Within this area 45 elderberry stems greater than 1 inch diameter (at ground level) were identified



VALLEY ELDERBERRY LONGHORN BEETLE HABITAT AND POPULATION SURVEYS-RESULTS

- ▶ **Thermalito Forebay and Afterbay**-Elderberry shrubs are generally absent from the Thermalito Forebay and Afterbay areas.
- ▶ **Oroville Wildlife Area**-Virtually all of the existing levees within the portion of the Oroville Wildlife Area bordering the Feather River contain exceptionally high densities of elderberry shrubs
- ▶ Shrubs over 5 inch diameter are common as are VELB emergence holes
- ▶ Good connectivity between subpopulations

